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School Level Differences in School Threat Scenario Written Plans: A National Analysis

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Abstract

This study was conducted to examine the effect of school level (i.e., elementary, middle, and high school) on written school safety plans in the areas of active shooter, hostage, and bomb threat scenarios. Inferential statistical analyses of nationwide survey data revealed the presence of statistically significant differences in the incidence of written plans for active shooter, hostage, and bomb threat scenarios by school level. Elementary schools were less likely to have written plans in active shooter, hostage, and bomb threat scenarios than were middle schools and high schools. In addition, written plans for active shooter and bomb threat scenarios were commonplace at each level compared to written hostage plans. Implications and recommendations for future research were discussed.

INTRODUCTION

An often-overlooked concern in school safety are teacher fears and their perceptions of preparedness in relation to the development and implementation of school policies. Ricketts (2007) examined several factors involving teachers' perceived fears of school violence and the school polices created to address safety concerns. The sample of teachers in this study completed surveys as a method of data collection along with the Ricketts (2007) multilevel path analysis of certain aspects of teacher fears. Ricketts (2007) targeted four major factors in his analysis: ecological factors, policies, perceived risk, and fear. An increase in school violence is more of an influence on teacher fear than school polices and their supposed effectiveness. Ricketts (2007) further stated that if school leaders wanted to reduce teacher fears they needed to create polices that decreased disruptive behavior and provided consistent support to faculty and staff. In addition to providing consistent support, Ricketts (2007) suggested that teachers, due to their large role in the educational environment, be included in the development of polices to create ownership and to acknowledge the teachers' expertise in working with school children.

Booren, Handy, and Power (2011) investigated school safety practices and school climate in relation to teachers and students. They specifically addressed the relationship of school climate with major school safety concerns and perceived importance of safety strategies. From the results of their survey, teachers considered school safety practices more important than did students. When students placed a high value on a particular safety procedure, their level of importance in practicing the skill increased. Booren et al. (2011) acknowledged the presence of differences between teacher and student understanding in relation to school safety practices. Students reported that they typically witnessed more unsafe behaviors at school than were reported by teachers.

The development and implementation of an emergency operations plan is crucial to all involved when the unthinkable occurs in the school system. Kingshott and McKenzie (2013) analyzed the elements of an effective emergency operations plan for schools focusing on the developmental and implementation phases of the plan. Attitudes and perceptions of the emergency operations plan and district safety practices were the focus of the survey. Kingshott and McKenzie (2013) concluded that apathy played a significant role in the creation and utilization of an emergency operations plan. Participants typically did not see the importance of such designing, training, and practice because the chance of an incident actually occurring was highly unlikely.

Schools have often responded in a reactionary way to school shootings and other forms of violence. Many times telltale signs were present from the school shooters themselves. Lenhardt, Farrell, and Graham (2010) conducted an archival review of targeted school shooter cases totaling 15 from 1996-2005 in the United States. Lenhardt et al. (2010) addressed three environmental variables: (a) school culture and climate, (b) peer/social connections, and (c) intentions shared by the shooters' own statements. Examined in the study were White males from the ages of 11 to 18 that consisted of the 15 lone shooters in 13 separate schools with two of the locations having two shooters each. Lenhardt et al. (2010) selected two independent evaluators that examined case files on each shooter, and additionally conducted telephone interviews with campus staff members and campus leaders. A matrix instrument was designed using the Federal Bureau of Investigation's Threat Assessment model with emphasis on Lenhardt et al. (2010) established environmental variables. Lenhardt et al. (2010) formulated the following recommendations related to targeted school shooters, (a) utilize a risk model, (b) support the risk model with the proper resources, (c) limit school size, (d) increase communication, (e) parent and community involvement, (f) develop ongoing preventive measures that can be applied to student learning objectives, (g) address mental health issues

frequently and proactively. These recommendations place the responsibility of preventing and improving the response to school safety on school leadership officials. It is paramount that educational leaders become the change agents for safety prevention and preparedness, but it will require all members of the learning community to be reflective and make adjustments to current safety practices to overcome this plague on our educational institutions.

Effective schools consistently perform at high levels academically and by applying quality policies and procedures to improve culture and climate. Academic performance is very important, but students and staff need to be reassured that their physical, mental, and social needs will be met as well when attending school. Steeves, Metallo, Byrd, Erickson, and Gresham (2017) examined the overall design and structure of school crisis manuals and related activities for six public elementary schools. These research elements included: (a) knowledge of crisis events, (b) training and availability and attendance, (c) knowledge of crisis plans and roles, (d) perceptions of preparedness, (e) predicting preparedness, (f) crisis plan components, and (g) improving preparedness. (h) Steeves et al. (2017) concluded that comprehensive crisis plans factored in to campus staff members true preparedness for a crisis situation. Furthermore, crisis planning templates from states and local governments were insufficient in providing mitigation practices for factors related to diversity, cultural differences, and potential language barriers. Consequently, schools may be ill prepared for emergencies based on inadequately designed written safety plans and the absence of best practice recommendations from national and state safety programs. In addition, Steeves et al. (2017) discovered that two-thirds of the respondents had not read their safety prevention plans. Although safety documents and practices are considered an important part of a school comprehensive plan, Steeves et al. (2017) revealed deficiencies in overall crisis preparedness.

Statement of the Problem

Based on a review of literature related to school safety, teachers and students are not well versed in the purpose of safety and security protocols; nor are they routinely involved in the development of these potential life saving measures. Steeves et al. (2017) contended that planning not only for the obvious and common types of threats to school safety, but should include prevention and preparation as a hallmark of a quality action plan to prepare of a real-life crisis in a school setting. Furthermore, legislators have passed laws at the national, state, and local levels to enhance awareness, develop security training, and produce security frameworks for schools to follow in relation to the most substantive safety issues affecting the field of education today. Steeves et al. (2017) examined legislation pertaining to school safety and indicated that legislation improves school safety accountability. Additionally, Diliberti et al. (2019) analyzed crisis planning techniques for a national study on school safety. Based on their findings, the most frequently performed school safety drills were for (a) natural disasters at 94%, (b) active shooters at 92%, and (c) bomb threats or incidents at 91%. According to Diliberti et al. (2019), schools were asked which factors most limited their safety prevention efforts. The three most frequently reported factors were (a) inadequate funds at 36%; (b) a lack of alternative placements or programs for disruptive students at 34%; and (c) federal, state, or district policies on disciplining special education students at 19%.

Unfortunately, schools have become more like a fortress than a place where knowledge is honed, and learning takes place. According to Rooney (2015), creating an environment similar to a prison fails to consider the social and emotional learning elements that students need to be well-rounded individuals. In addition, students need a multitude of experiences to learn more about themselves and our culture. Educational leaders challenged with the task of

creating a safe learning environment that protects the mental, physical, and social well-being of students, staff, and all members of the learning community.

Purpose of the Study

The purpose of this study was to examine the degree to which differences were present in active shooter scenario written plans as a function of school level. Survey data were analyzed to determine the degree to which differences might be present in hostage scenario written plans as a function of school level. Furthermore, the degree to which differences were present in bomb threat scenario written plans as a function of school level was addressed. Through the analysis of a nationwide dataset the degree to which school level differences were present in active shooter, hostage, and bomb threat scenario written plan was determined.

Research Questions

The following research questions were addressed in this study: (a) What is the difference in active shooter scenario written plans in public schools as a function of school level? (b) What is the difference in hostage scenario written plans in public schools as a function of school level? and (c) What is the difference in bomb threat scenario written plans in public schools as a function of school level?

Significance of the Study

Creating a culture of safety in schools that increases awareness, provides practical safety training, and improves the implementation of learned skills in the area of campus intruder emergencies is a leading concern for educational administrators and school board of trustees. School safety dominates media headlines and is a constant reminder of the ever changing perception of the true mission of educational institutions. No longer are schools viewed a safe environment that meet the physical, mental, and social well-being of learners and educators alike. Numerous research studies related to frequent, practical, and applicable safety training have been conducted to enhance school safety. In addition, campus intruder awareness, skill training, and implementation techniques could further enhance school district response times and overall success when encountering such dangers to students and staff members' lives.

Information gathered in relation to school safety and the prevalence of school intruder situations may contribute to prevention or possible survival if a tragedy were to occur. School district board of trustees and administrators should consider all options related to the safety of their students and staff. Many factors contribute to the effectiveness of active shooter, hostage, and bomb threat written plans as it relates to school level. Therefore, a study in the areas of active shooter, hostage, and bomb threat written policies could be beneficial to current and future educational leaders.

Research Design

The research design for this empirical investigation was non-experimental, causal comparative. Johnson and Christensen (2017) described this method of research as a relationship study between independent and dependent variables where the independent variable is not influenced or manipulated. Subsequently, Johnson and Christensen (2017) stated with this form of research extraneous variables must be considered, and investigators may need to statistically control for certain factors affecting the dependent variables. Archival data were used in this study. In this investigation, the independent variable was school level

(i.e., elementary, middle, and high schools). The dependent variables were active shooter, hostage, and bomb threat written scenario plans for schools.

Participants and Instrumentation

Participants in this study were principals by school level who participated in a safety survey that inventoried schools with or without written plans for active shooter, hostage, and bomb threat scenarios along with other safety and security data from public schools. The School Survey on Crime and Safety gathers data from principals from primary and secondary public schools as mandated by the federal government. The survey questions focus on a variety of school related safety and security questions that could assist schools in implementing effective safety measures and prevent or reduce loss of life, property, and incidence of crime in public schools according to Diliberti et al. (2019). Respondents completed the survey by answering the questions with either a Yes or a No. For the purpose of this study, school level was based on the standard school levels of elementary, middle, and high schools respectively. In addition, written plans were those school plans that are tangible and in a usable form not verbal or word of mouth.

FINDINGS

To ascertain whether differences were present in written active shooter, hostage, and bomb threat scenario school safety plans by school level, Pearson chi-square analyses were conducted. This statistical procedure was viewed as the optimal statistical procedure to use because frequency data were present for active shooter, hostage, and bomb threat written plans, and for school level. As such, chi-squares are the statistical procedure of choice when both variables in each research question are categorical (Slate & Rojas-LeBouef, 2011). In addition, with the large sample size, the available sample size per cell was more than five. Therefore, the assumptions for using a Pearson chi-square procedure were met.

For the research question related to a written plan for active shooter scenario differences in school level, the result was statistically significant, $\chi^2(2) = 11.01$, $p = .004$. The effect size for this finding, Cramer's V, was below small, .07 (Cohen, 1988). As revealed in Table 1, more than two times as many elementary schools did not have an active shooter scenario written plan compared to high schools. More than half as many elementary schools did not have an active shooter scenario written plan than did middle schools.

Table 1. Descriptive Statistics for Written Active Shooter Scenario Plans by School Level

School Level	Written Plan n and %age of Total	No Written Plan n and %age of Total
Elementary Schools	(n = 473) 91.70%	(n = 43) 8.30%
Middle Schools	(n = 680) 94.60%	(n = 39) 5.40%
High Schools	(n = 743) 96.00%	(n = 31) 4.00%

Regarding a written plan for hostage scenario, the result was statistically significant, $\chi^2(2) = 9.68$, $p = .008$. The effect size for this finding, Cramer's V, was below small, .07 (Cohen, 1988). Almost one third more elementary schools did not have a written plan for a hostage scenario than high schools. Almost one fifth more elementary schools did not have a written plan for a hostage scenario than middle schools. Table 2 contains the descriptive statistics for this analysis.

Table 2. Descriptive Statistics for Written Hostage Scenario Plans by School Level

School Level	Written Plan n and %age of Total	No Written Plan n and %age of Total
Elementary Schools	(n = 298) 57.80%	(n = 218) 42.20%
Middle Schools	(n = 448) 62.30%	(n = 271) 37.70%
High Schools	(n = 513) 66.30%	(n = 261) 33.70%

A statistically significant difference was present for written plans for a bomb threat scenario, $\chi2(2) = 23.21$, $p < .001$. The effect size for this finding, Cramer's V, was small, .11 (Cohen, 1988). As three times as many elementary schools did not have a written bomb threat scenario plan than did high schools and more than two times as many elementary schools did not have such a plan in comparison to middle schools. Revealed in Table 3 are the descriptive statistics for this analysis.

Table 3. Descriptive Statistics for Written Bomb Threat Scenario Plans by School Level

School Level	Written Plan n and %age of Total	No Written Plan n and %age of Total
Elementary Schools	(n = 481) 93.20%	(n = 35) 6.80%
Middle Schools	(n = 697) 96.90%	(n = 22) 3.10%
High Schools	(n = 760) 98.20%	(n = 14) 1.80%

DISCUSSION AND RESULT

During this investigation, the degree to which differences were present in written plans for active shooter, hostage, and bomb threats by school level was addressed. Statistically significant differences were revealed for active shooter, hostage, and bomb threat written plans by school level. High school written plans for each of the three threat scenarios occurred more often than at the elementary and middle school levels. At the elementary level, active shooter written plans were two times less likely to be implemented than at the middle and high school levels. Based on these data, lack of adequate plans could create a situation where elementary schools were more vulnerable to active shooters than other school levels in the study. In addition, written plans for hostage threats were implemented 10 times more often at the high school level than at the elementary level. Although hostage situations occur less frequently, elementary schools were the least prepared with less frequent written plans in place compared to the other school levels. This analysis could potentially generate opportunities for such attacks on our most vulnerable students. Similarly, elementary schools were five percent less likely to have a written plan for bomb threats compared to the high school level.

Safety plans especially those plans that are written and practiced on a regular basis may improve a campus' response to a crisis. It is paramount that school districts prepare for the worst-case scenario to ensure a timely and adequate response to a dangerous situation. Based on the statistical data, elementary schools are further hindered by the lack of written plans compared to their school level counterparts. During the analysis of the research data, a third of each school level had no written hostage threat plan. Deficiencies in written plans for safety purposes create a multitude of liabilities for school districts. Creating an environment where all members of the learning community have a safety-first mindset will hopefully improve school administrators' response to emergencies and mitigate the loss of life and property if and when safety breaches in school systems occur in the future.

Implications for Policy and for Practice

Developing and implementing safety and security written plans is essential for prevention and mitigation in the public school system. Information from the School Survey on Crime and Safety in the areas of written plans for active shooter, hostage, and bomb threat scenarios was utilized in this study. Based on the data analyses, written plans in the aforementioned areas for elementary schools were insufficient compared to secondary schools, hostage written plans were not implemented in a third of elementary, and secondary schools, and elementary and middle schools were inconsistent in their development of written plans compared to high schools as revealed by principal responses to the survey.

Therefore, policymakers should consider greater emphasis on the implementation of written plans as a best practice for all public schools especially at the elementary level. Emphasis could be placed on the development of a written plan database for all schools to submit their written plans for review. This practice would be most beneficial at the state or regional level to ensure accountability and continuity.

In addition, policymakers should consider a possible study in hostage threats for schools that could be mandated to determine if an incident or emergency should be considered when developing written plans. It may be possible that creating, writing, and practicing such a plan may not be necessary. Consuming valuable time when other potential emergencies are more practical for implementation may not be wise and could affect the application of other more practical safety procedures. If hostage written plans are considered necessary, then a greater importance should be placed in the enactment of such practices and creation of some form of accountability to protect students, faculty, and staff across the nation from dangers of this nature.

Correspondingly, elected officials and their administrations must determine if policies currently enacted are necessary and sufficient for school safety across all school levels. Deficiencies were clearly documented in the presence of elementary and middle school written plans compared to high school. High schools are more likely than not to complete most plans at a higher rate than elementary and middle schools. Policymakers should take this information into consideration when developing accountability protocols for schools. The accountability protocols could be addressed at the state or regional level. The possibility exists that principals of elementary and middle schools need more education in the importance of safety policy development; especially in relation to written safety plans.

Recommendations for Future Research

Based upon the findings of this study, several recommendations are possible for further research related to school safety practices and procedures. The data analysis for this study pertained only to written plans for active shooter, hostage, and bomb threat scenarios. Additional research could be conducted for other safety written plans, safety drill frequencies, and similar related scenarios. Furthermore, qualitative interviews of a sampling of school level principals could glean additional data to alleviate any concerns about extraneous variables. Future researchers could ask more poignant questions about the community makeup, urban or rural status, and even the physical design of school campuses. Similarly, a more focused study on each school level independently; especially on elementary implementation on written safety plans could supplement the data of this research.

CONCLUSION

In conclusion, school safety issues will continue to draw the attention of students, parents, educators, stakeholders, and community members. Children's safety should be of the utmost importance. Placing greater emphasis on written plans in the area of active shooter, hostage, and bomb threat scenarios should give comfort and peace of mind. Results discussed herein are valid concerns about elementary written plan implementation. School systems that do not plan in an effective manner for the most common emergencies are potential creating an environment of apathy among its staff and setting themselves up for failure in the wake of a disaster. Educators should demand of each other a more assertive approach to the overall safety practices and protocols in schools. Two times the number of high schools had active shooter written plans than elementary schools. A third of schools answered no to the survey for a written hostage threat plans. Elementary and middle schools were consistently lacking in written plans more frequently than high schools. Certainly, all students deserve the same consideration and attention to school safety at any school level.

REFERENCES

Booren, L.M., Handy D.J., & Power, T.G. (2011). Examining perceptions of school safety strategies, school climate, and violence. *Youth Violence and Juvenile Justice*, *9*(2), 171-187. doi:10.1177/1541204010374297

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.

Diliberti, M., Jackson, M., Correa, S., and Padgett, Z. (2019). *Crime, violence, discipline, and safety in U.S. public schools: Findings from the school survey on crime and safety: 2017–18* (NCES 2019-061). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from http://nces.ed.gov/pubsearch.

Johnson, B., & Christensen, L.B. (2017). *Educational research quantitative, qualitative, and mixed methods* (6th ed.). Thousand Oaks, CA: Sage.

Kingshott, B.F., & McKenzie, D.G. (2013). Developing crisis management protocols in the context of school safety. *Journal of Applied Security Research*, *8*(2), 222-245. doi:10.1080/191610.2013.765339

Lenhardt, A.C., Farrell, M.L., & Graham, L.W. (2010). Providing anchors-reclaiming our troubled youth: Lessons for leaders from a study of 15 targeted school shooters. *The Educational Forum, 74*(2), 104-116. doi.org/10.1080/00131721003604405

Ricketts, M.L. (2007). K-12 teachers' perceptions of school policy and fear of school violence. *Journal of School Violence*, *6*(3), 45-67. doi:10.1300/J202v06n03_04

Rooney, T. (2015). Higher stakes-the hidden risks of school security fences for children's learning environment. *Environmental Education Research*, *21*(6), 885-898. doi:10.1080/13504622.2014.936308

Slate, J.R., & Rojas-LeBouef, A. (2011). *Calculating basic statistical procedures in SPSS: A self-help and practical guide to preparing theses, dissertations, and manuscripts.* Ypsilanti, MI: NCPEA Press.

Steeves, R.M., Metallo, S.A., Byrd, S.M., Erickson, M.R., & Gresham, F.M. (2017). Crisis preparedness in schools: Evaluating staff perspectives and providing recommendations for best practices. *Psychology in the Schools*, *54*(6), 563-580. doi:10.1002/pits.22017